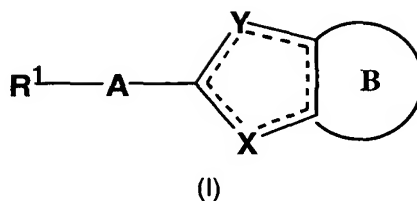


CLAIMS

1. A compound of the formula (I):



wherein A is -NR(C=O) , -(C=O)NR , $(\text{C}_2\text{-C}_6)\text{alkynyl-}$, or a bond;

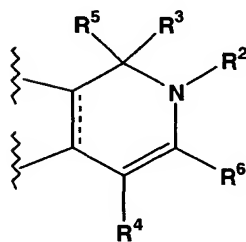
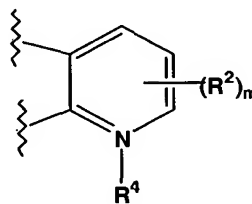
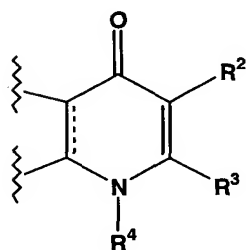
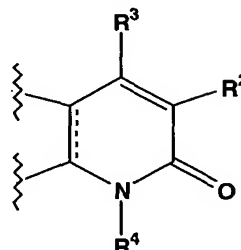
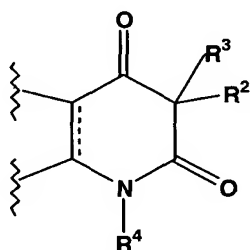
X is selected from -N= , $\text{-NR}^9\text{-}$, -O- , -S- , $\text{-CR}^{10}\text{-}$, $\text{>C(R}^{11})_2\text{}$,

Y is selected from -N= , $\text{-NR}^9\text{-}$, -O- , -S- , $\text{-CR}^{10}\text{-}$, $\text{>C(R}^{11})_2\text{}$;

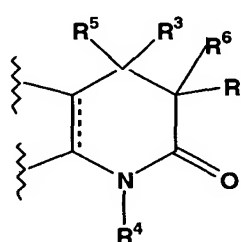
with the proviso that when Y is O or S, X is not O or S;

dashed lines represent optional double bonds;

ring B is selected from the group consisting of:



, and



wherein each R, R¹, R², R³, R⁵, R⁶, R⁹, R¹⁰, and R¹¹ are the same or different, where ever they appear, and each is independently selected from the group consisting of (C₁-C₆)alkyl-, (C₂-C₆)alkenyl-, (C₂-C₆)alkynyl-, (C₃-C₁₀)cycloalkyl-, (C₆-C₁₀)aryl-, (C₁-C₁₀)heterocyclyl-, (C₁-C₁₀)heteroaryl-, (C₃-C₁₀)cycloalkyl-(C₁-C₆)alkyl-, (C₆-C₁₀)aryl-(C₁-C₆)alkyl-, (C₁-C₁₀)heterocyclyl-(C₁-C₆)alkyl-, (C₁-C₁₀)heteroaryl-(C₁-C₆)alkyl-, (C₃-C₁₀)cycloalkyl-(C₂-C₆)alkenyl-, (C₆-C₁₀)aryl-(C₂-C₆)alkenyl-, (C₁-C₁₀)heterocyclyl-(C₂-C₆)alkenyl-, (C₆-C₁₀)aryl-(C₂-C₆)alkenyl-, (C₁-C₁₀)heteroaryl-(C₂-C₆)alkenyl-, (C₃-C₁₀)cycloalkyl-(C₂-C₆)alkynyl-, (C₆-C₁₀)aryl-(C₂-C₆)alkynyl-, (C₁-C₁₀)heterocyclyl-(C₂-C₆)alkynyl-, (C₁-C₁₀)heteroaryl-(C₂-C₆)alkynyl-; wherein each of the aforesaid group members, (C₁-C₆)alkyl-, (C₂-C₆)alkenyl-, (C₂-C₆)alkynyl-, (C₃-C₁₀)cycloalkyl-, (C₆-C₁₀)aryl-, (C₁-C₁₀)heterocyclyl-, (C₁-C₁₀)heteroaryl-, (C₃-C₁₀)cycloalkyl-(C₁-C₆)alkyl-, (C₆-C₁₀)aryl-(C₁-C₆)alkyl-, (C₁-C₁₀)heterocyclyl-(C₁-C₆)alkyl-, (C₁-C₁₀)heteroaryl-(C₁-C₆)alkyl-, (C₃-C₁₀)cycloalkyl-(C₂-C₆)alkenyl-, (C₆-C₁₀)aryl-(C₂-C₆)alkenyl-, (C₁-C₁₀)heterocyclyl-(C₂-C₆)alkenyl-, (C₆-C₁₀)aryl-(C₂-C₆)alkenyl-, (C₁-C₁₀)heteroaryl-(C₂-C₆)alkenyl-, (C₃-C₁₀)cycloalkyl-(C₂-C₆)alkynyl-, (C₆-C₁₀)aryl-(C₂-C₆)alkynyl-, (C₁-C₁₀)heterocyclyl-(C₂-C₆)alkynyl-, and (C₁-C₁₀)heteroaryl-(C₂-C₆)alkynyl-, may be optionally independently substituted with one to three suitable substituents selected from the group consisting of hydrogen, halogen, hydroxy, -CN, (C₁-C₄)alkyl-, (C₁-C₄)alkoxy-, CF₃-, CF₃O-, (C₆-C₁₀)aryl-, (C₁-C₁₀)heteroaryl-, (C₆-C₁₀)aryl-(C₁-C₄)alkyl-, (C₁-C₁₀)heteroaryl-(C₁-C₄)alkyl-, HO(C=O)-, (C₁-C₄)alkyl-(O)(C=O)-, (C₁-C₄)alkyl-(O)(C=O)(C₁-C₄)alkyl-, (C₁-C₄)alkyl-(C=O)-, (C₁-C₄)alkyl-(C=O)(C₁-C₄)alkyl-, -(S=O)R, -(SO₂)R, and NR⁷R⁸ wherein R⁷ and R⁸ are independently selected from hydrogen, (C₁-C₆)alkyl;

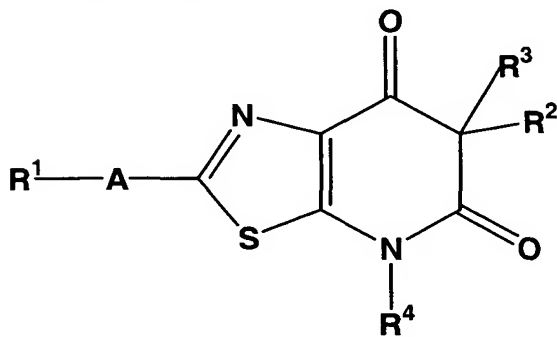
R, R³, R⁵, R⁶, R⁹, R¹⁰, and R¹¹ may further be hydrogen;

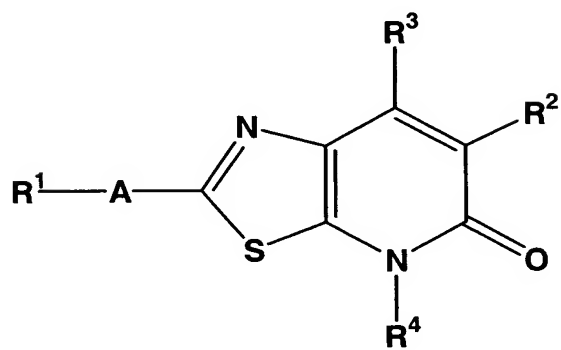
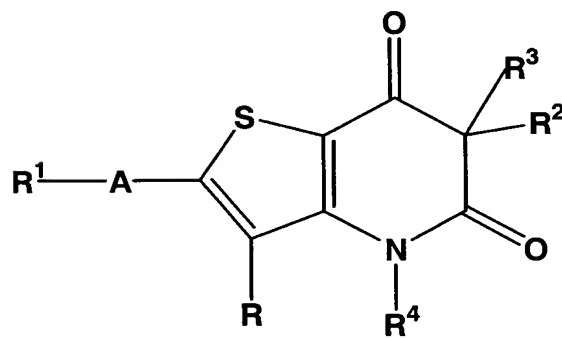
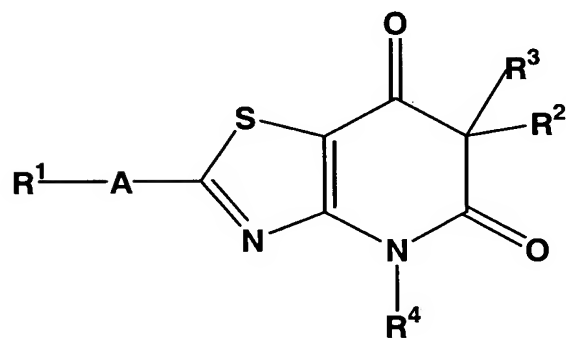
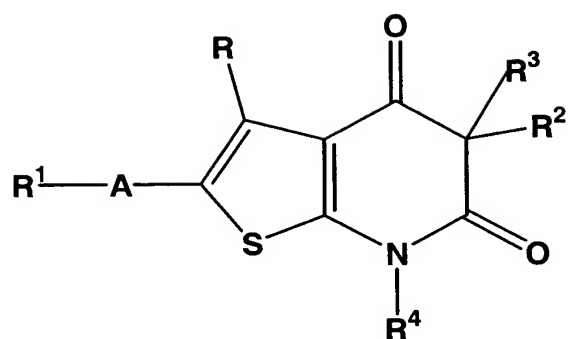
R⁴ is selected from the group consisting of hydrogen and (C₁-C₆)alkyl-, and R⁴ may be optionally substituted with one to three suitable substituents selected from the group consisting of halogen, hydroxy, -CN, CF₃-, and CF₃O-;

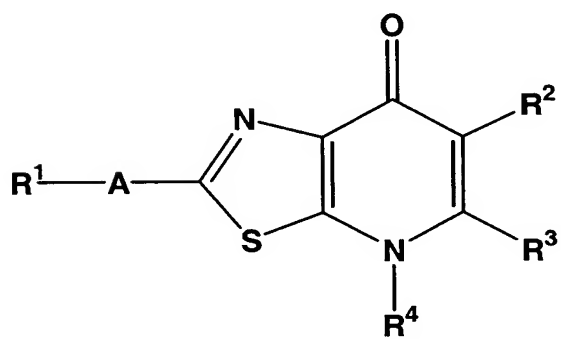
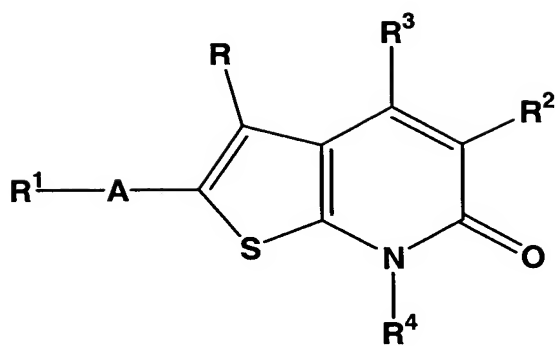
m is an integer from 0-3; or

a pharmaceutically acceptable salt thereof.

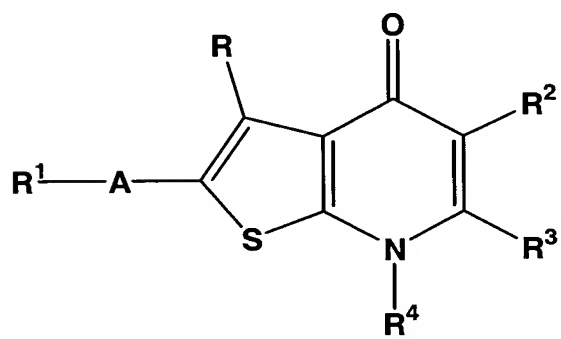
2. A compound according to claim 1 selected from the group consisting of:



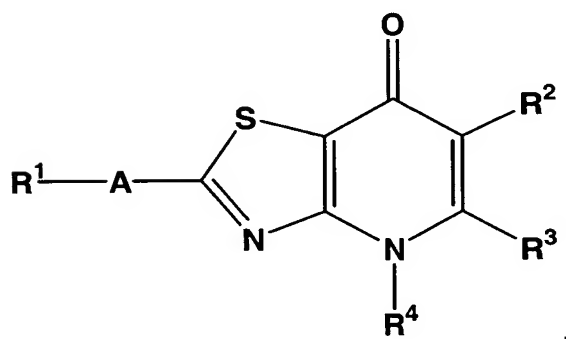
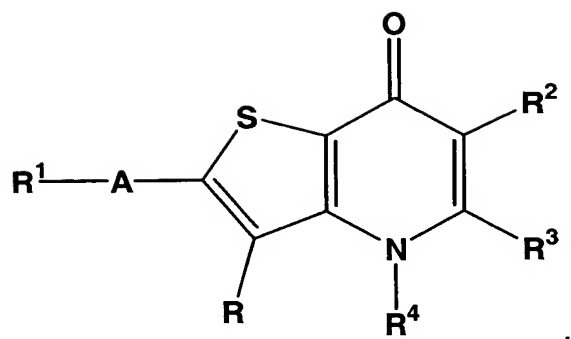




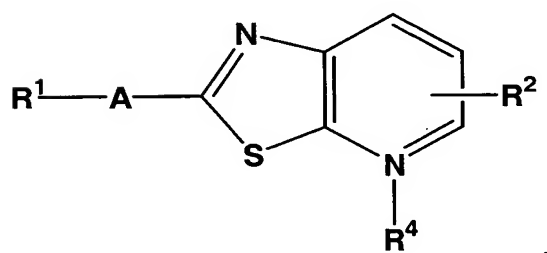
5



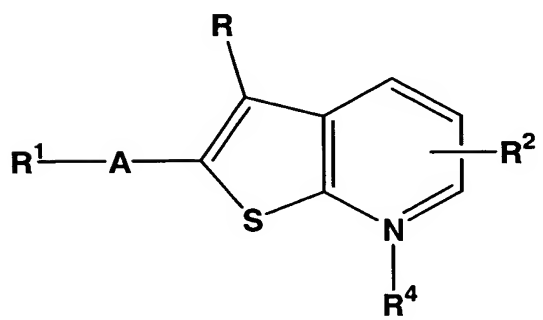
10

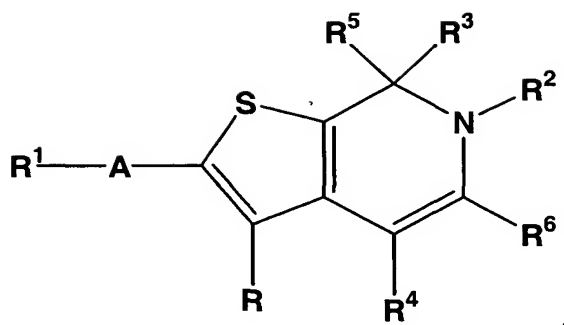


5

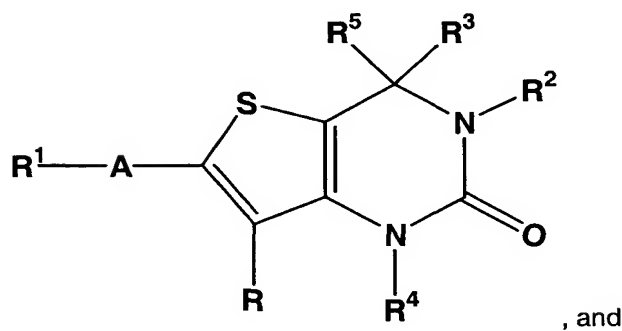


10

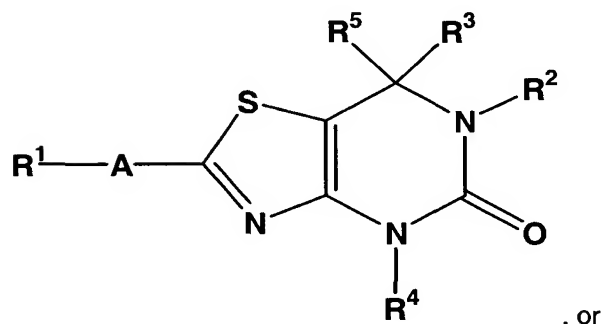




5



, and



, or

10

a pharmaceutically acceptable salt thereof.

3. A compound of any Claim 1 or Claim 2, wherein R¹ and R² are each independently
 15 selected from (C₃-C₁₀)cycloalkyl-(C₁-C₆)alkyl-, (C₆-C₁₀)aryl-(C₁-C₆)alkyl-, (C₁-C₁₀)heterocyclyl-
 (C₁-C₆)alkyl-, (C₁-C₁₀)heteroaryl-(C₁-C₆)alkyl-, (C₃-C₁₀)cycloalkyl-(C₂-C₆)alkenyl-, (C₆-C₁₀)aryl-
 (C₂-C₆)alkenyl-, (C₁-C₁₀)heterocyclyl-(C₂-C₆)alkenyl-, (C₁-C₁₀)heteroaryl-(C₂-C₆)alkenyl-, (C₃-

C₁₀)cycloalkyl-(C₂-C₆)alkynyl-, (C₆-C₁₀)aryl-(C₂-C₆)alkynyl-, (C₁-C₁₀)heterocyclyl-(C₂-C₆)alkynyl-, and (C₁-C₁₀)heteroaryl-(C₂-C₆)alkynyl-.

4. The compound of Claim 3, wherein each of R³, R⁴, R⁵, and R⁶ is independently
5 selected from the group consisting of hydrogen and (C₁-C₆)alkyl-.

5. The compound according to Claim 1 selected from the group consisting of:

6-(3,4-Difluoro-benzyl)-4-methyl-5,7-dioxo-4,5,6,7-tetrahydro-thiazolo[5,4-b]pyridine-2-
carboxylic acid (2-methoxy-pyridin-4-ylmethyl)-amide;

10 6-(3,4-Difluoro-benzyl)-4-methyl-5,7-dioxo-4,5,6,7-tetrahydro-thiazolo[5,4-b]pyridine-2-
carboxylic acid (pyridin-4-ylmethyl)-amide;

6-(3,4-Difluoro-benzyl)-4-methyl-5,7-dioxo-4,5,6,7-tetrahydro-thiazolo[5,4-b]pyridine-2-
carboxylic acid benzylamide;

15 5-(3,4-Difluoro-benzyl)-7-methyl-4,6-dioxo-4,5,6,7-tetrahydro-thieno[2,3-b]pyridine-2-
carboxylic acid benzylamide;

5-(3,4-Difluoro-benzyl)-7-methyl-4,6-dioxo-4,5,6,7-tetrahydro-thieno[2,3-b]pyridine-2-
carboxylic acid (pyridin-4-ylmethyl)-amide;

5-(3,4-Difluoro-benzyl)-7-methyl-4,6-dioxo-4,5,6,7-tetrahydro-thieno[2,3-b]pyridine-2-
carboxylic acid (2-methoxy-pyridin-4-ylmethyl)-amide;

20 6-(3,4-Difluoro-benzyl)-4-methyl-5-oxo-4,5-dihydro-thiazolo[5,4-b]pyridine-2-carboxylic
acid benzylamide;

6-(3,4-Difluoro-benzyl)-4-methyl-5-oxo-4,5-dihydro-thiazolo[5,4-b]pyridine-2-carboxylic
acid (pyridin-3-ylmethyl)-amide;

25 6-(3,4-Difluoro-benzyl)-4-methyl-5-oxo-4,5-dihydro-thiazolo[5,4-b]pyridine-2-carboxylic
acid (pyridin-4-ylmethyl)-amide;

6-(3,4-Difluoro-benzyl)-4-methyl-5-oxo-4,5-dihydro-thiazolo[5,4-b]pyridine-2-carboxylic
acid benzylamide;

5-(3,4-Difluoro-benzyl)-7-methyl-6-oxo-6,7-dihydro-thieno[2,3-b]pyridine-2-carboxylic
acid (2-methoxy-pyridin-4-ylmethyl)-amide;

30 5-(3,4-Difluoro-benzyl)-7-methyl-6-oxo-6,7-dihydro-thieno[2,3-b]pyridine-2-carboxylic
acid (pyridin-4-ylmethyl)-amide;

5-(3,4-Difluoro-benzyl)-7-methyl-6-oxo-6,7-dihydro-thieno[2,3-b]pyridine-2-carboxylic
acid benzylamide;

35 6-(4-Fluoro-benzyl)-4-methyl-7-oxo-4,7-dihydro-thiazolo[5,4-b]pyridine-2-carboxylic
acid (pyridin-4-ylmethyl)-amide;

6-(4-Fluoro-benzyl)-4-methyl-7-oxo-4,7-dihydro-thiazolo[5,4-b]pyridine-2-carboxylic
acid benzylamide; or

a pharmaceutically acceptable salt thereof.

6. The compound according to Claim 1 selected from the group consisting of:
- 4-(2-Benzylcarbamoyl-4-methyl-7-oxo-4,7-dihydro-thiazolo[5,4-b]pyridin-6-ylmethyl)-benzoic acid;
- 5 5-(4-Fluoro-benzyl)-7-methyl-4-oxo-4,7-dihydro-thieno[2,3-b]pyridine-2-carboxylic acid (pyridin-4-ylmethyl)-amide;
- 5-(3,4-Difluoro-benzyl)-7-methyl-4-oxo-4,7-dihydro-thieno[2,3-b]pyridine-2-carboxylic acid benzylamide;
- 4-(2-Benzylcarbamoyl-7-methyl-4-oxo-4,7-dihydro-thieno[2,3-b]pyridin-5-ylmethyl)-benzoic acid.
- 10 4-{2-[(2-Methoxy-pyridin-4-ylmethyl)-carbamoyl]-thiazolo[5,4-b]pyridin-6-ylmethyl}-benzoic acid;
- 4-(2-Benzylcarbamoyl-thiazolo[5,4-b]pyridin-6-ylmethyl)-benzoic acid;
- 6-(3,4-Difluoro-benzyl)-thiazolo[5,4-b]pyridine-2-carboxylic acid benzylamide;
- 15 4-(2-Benzylcarbamoyl-thieno[2,3-b]pyridin-5-ylmethyl)-benzoic acid;
- 4-{2-[(Pyridin-4-ylmethyl)-carbamoyl]-thieno[2,3-b]pyridin-5-ylmethyl}-benzoic acid;
- 5-(3,4-Difluoro-benzyl)-thieno[2,3-b]pyridine-2-carboxylic acid (pyridin-4-ylmethyl)-amide;
- 6-(3,4-Difluoro-benzyl)-5,7-dioxo-4,5,6,7-tetrahydro-thiazolo[4,5-b]pyridine-2-carboxylic acid (pyridin-4-ylmethyl)-amide;
- 20 6-(4-Fluoro-benzyl)-4-methyl-5,7-dioxo-4,5,6,7-tetrahydro-thieno[3,2-b]pyridine-2-carboxylic acid benzylamide;
- 4-{1-Methyl-2-oxo-6-[(pyridin-4-ylmethyl)-carbamoyl]-1,4-dihydro-2H-thieno[3,2-d]pyrimidin-3-ylmethyl}-benzoic acid;
- 25 6-(4-Fluoro-benzyl)-4-methyl-5-oxo-4,5,6,7-tetrahydro-thiazolo[4,5-d]pyrimidine-2-carboxylic acid benzylamide;
- 6-(3,4-Difluoro-benzyl)-4-methyl-7-oxo-4,7-dihydro-thieno[3,2-b]pyridine-2-carboxylic acid (pyridin-4-ylmethyl)-amide;
- 6-Benzyl-4-methyl-7-oxo-4,7-dihydro-thiazolo[4,5-b]pyridine-2-carboxylic acid (pyridin-4-ylmethyl)-amide;
- 30 6-(3,4-Difluoro-benzyl)-4-methyl-6,7-dihydro-thieno[2,3-c]pyridine-2-carboxylic acid benzylamide; and
- 6-(3,4-Difluoro-benzyl)-4-methyl-6,7-dihydro-thieno[2,3-c]pyridine-2-carboxylic acid (pyridin-3-ylmethyl)-amide; or
- 35 a pharmaceutically acceptable salt thereof.
7. The compound according to Claim 1 selected from the group consisting of:

- 6-(3,4-Difluoro-benzyl)-4-methyl-2-(3-phenyl-prop-1-ynyl)-4H-thiazolo[5,4-b]pyridine-5,7-dione;
- 5-(3,4-Difluoro-benzyl)-7-methyl-2-(3-phenyl-prop-1-ynyl)-7H-thieno[2,3-b]pyridine-4,6-dione;
- 5 6-(3,4-Difluoro-benzyl)-4-methyl-2-(3-phenyl-prop-1-ynyl)-4H-thiazolo[5,4-b]pyridin-5-one;
- 5-(3,4-Difluoro-benzyl)-7-methyl-2-(3-phenyl-prop-1-ynyl)-7H-thieno[2,3-b]pyridin-6-one;
- 6-(4-Fluoro-benzyl)-4-methyl-2-(3-phenyl-prop-1-ynyl)-4H-thiazolo[5,4-b]pyridin-7-one;
- 10 4-[4-Methyl-7-oxo-2-(3-phenyl-prop-1-ynyl)-4,7-dihydro-thiazolo[5,4-b]pyridin-6-ylmethyl]-benzoic acid;
- 5-(4-Fluoro-benzyl)-7-methyl-2-(3-phenyl-prop-1-ynyl)-7H-thieno[2,3-b]pyridin-4-one;
- 5-(3,4-Difluoro-benzyl)-7-methyl-2-(3-phenyl-prop-1-ynyl)-7H-thieno[2,3-b]pyridin-4-one;
- 15 4-[7-Methyl-4-oxo-2-(3-phenyl-prop-1-ynyl)-4,7-dihydro-thieno[2,3-b]pyridin-5-ylmethyl]-benzoic acid;
- 4-[2-(3-Phenyl-prop-1-ynyl)-thiazolo[5,4-b]pyridin-6-ylmethyl]-benzoic acid;
- 6-(3,4-Difluoro-benzyl)-2-(3-phenyl-prop-1-ynyl)-thiazolo[5,4-b]pyridine;
- 4-[2-(3-Phenyl-prop-1-ynyl)-thieno[2,3-b]pyridin-5-ylmethyl]-benzoic acid;
- 20 5-(3,4-Difluoro-benzyl)-2-(3-phenyl-prop-1-ynyl)-thieno[2,3-b]pyridine;
- 6-(3,4-Difluoro-benzyl)-2-(3-phenyl-prop-1-ynyl)-4H-thiazolo[4,5-b]pyridine-5,7-dione;
- 6-(4-Fluoro-benzyl)-4-methyl-2-(3-phenyl-prop-1-ynyl)-4H-thieno[3,2-b]pyridine-5,7-dione;
- 4-[1-Methyl-2-oxo-6-(3-phenyl-prop-1-ynyl)-1,4-dihydro-2H-thieno[3,2-d]pyrimidin-3-ylmethyl]-benzoic acid;
- 25 6-(4-Fluoro-benzyl)-4-methyl-2-(3-phenyl-prop-1-ynyl)-6,7-dihydro-4H-thiazolo[4,5-d]pyrimidin-5-one;
- 6-(3,4-Difluoro-benzyl)-4-methyl-2-(3-phenyl-prop-1-ynyl)-4H-thieno[3,2-b]pyridin-7-one;
- 30 6-Benzyl-4-methyl-2-(3-phenyl-prop-1-ynyl)-4H-thiazolo[4,5-b]pyridin-7-one; and
- 6-(3,4-Difluoro-benzyl)-4-methyl-2-(3-phenyl-prop-1-ynyl)-6,7-dihydro-thieno[2,3-c]pyridine; or
- a pharmaceutically acceptable salt thereof.
- 35 8. A pharmaceutical composition for the treatment of a condition selected from the group consisting of connective tissue disorders, inflammatory disorders, immunology/allergy disorders, infectious diseases, respiratory diseases, cardiovascular diseases, eye diseases, metabolic diseases, central nervous system (CNS) disorders, liver/kidney diseases,

reproductive health disorders, gastric disorders, skin disorders and cancers in a mammal, including a human, comprising an amount of a compound of Claim 1 effective in such treatment and a pharmaceutically acceptable carrier.

- 5 9. The pharmaceutical composition according to Claim 8, wherein the compound of Claim 1 is a compound according to any one of Claims 5 to 7.
10. A method for treating arthritis, comprising administering to a patient suffering from an arthritis disease a nontoxic antiarthritic effective amount of a compound of Claim 1.
- 10 11. The method according to Claim 10, wherein the arthritis is osteoarthritis or rheumatoid arthritis.
- 15 12. The method according to Claim 11, wherein the compound of Claim 1 is a compound according to any one of Claims 5 to 7.